

FIG.2 PRIOR ART

FIG.3 PRIOR ART

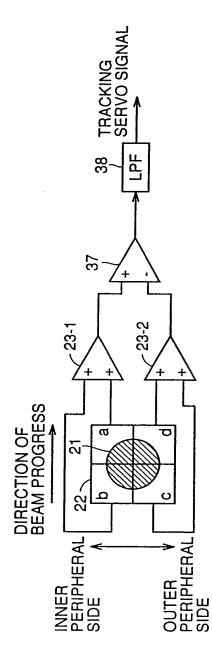


FIG.4

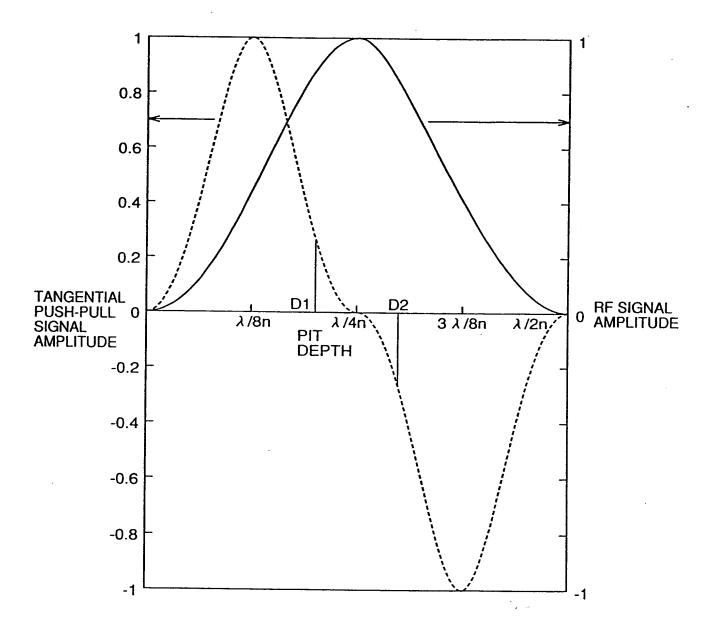


FIG.5A

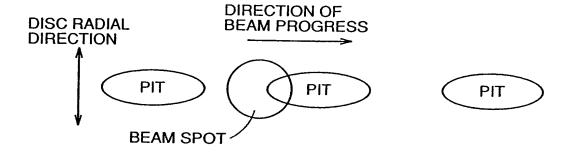
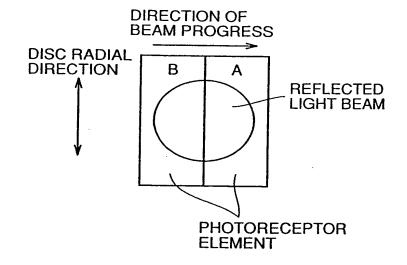


FIG.5B



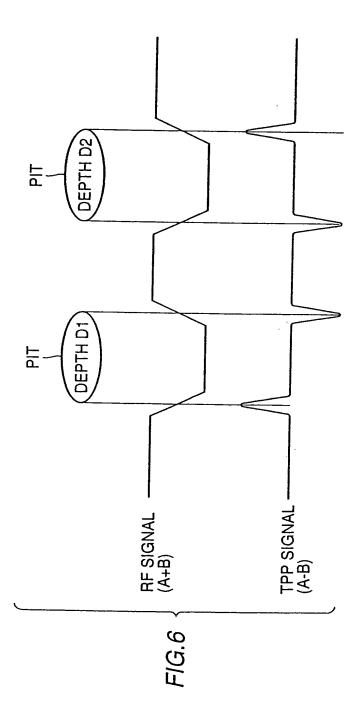
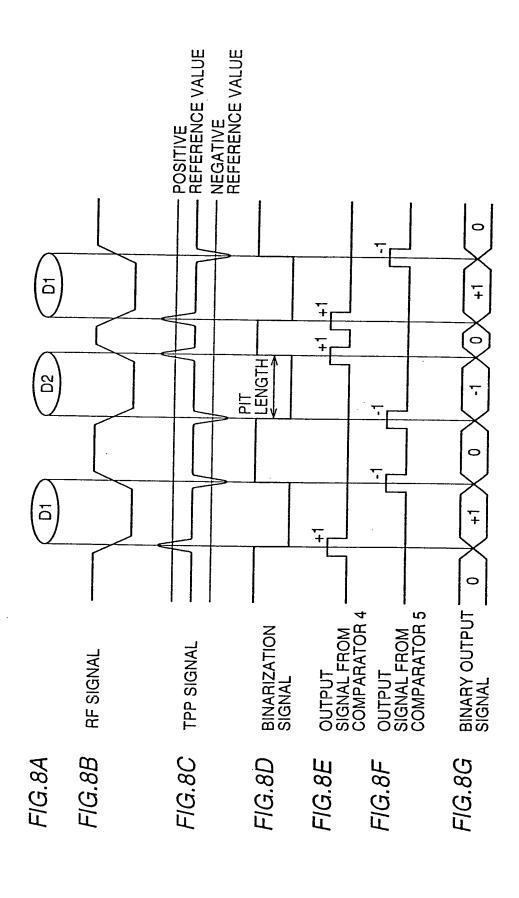


FIG.7



TO DEMODULATION CIRCUIT LATCH LATCH ω BINARIZATION CIRCUIT EQUALIZING COMP COMP REFLECTED LIGHT BEAM TPP 吊 DIRECTION OF BEAM PROGRESS മ

F/G.9

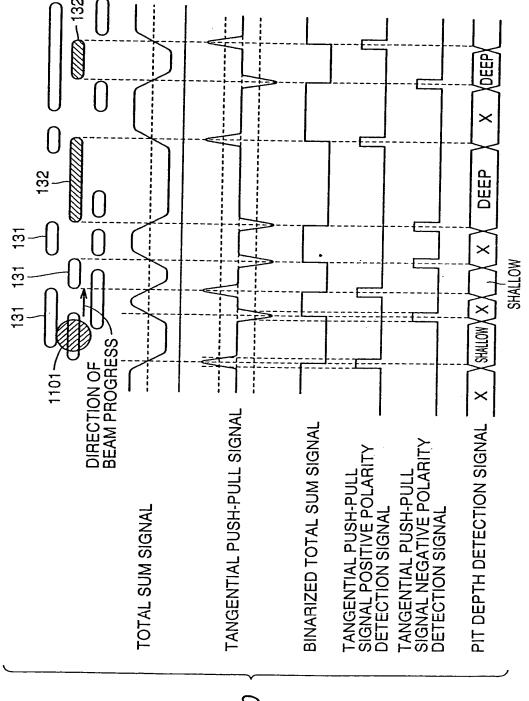
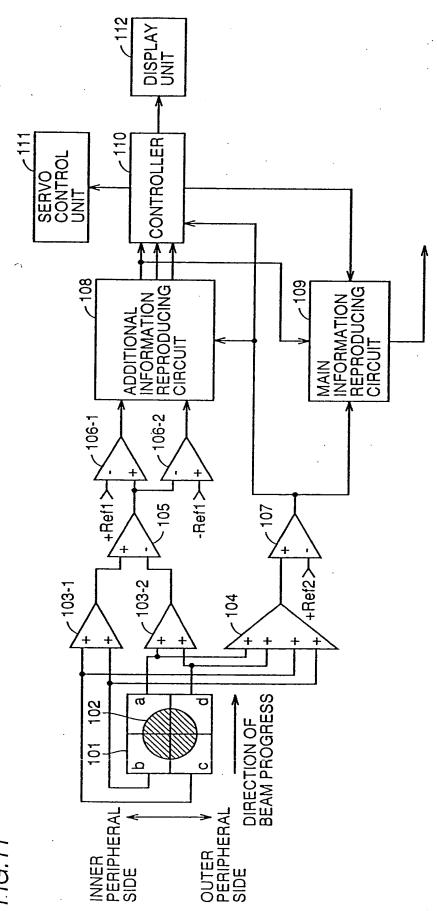
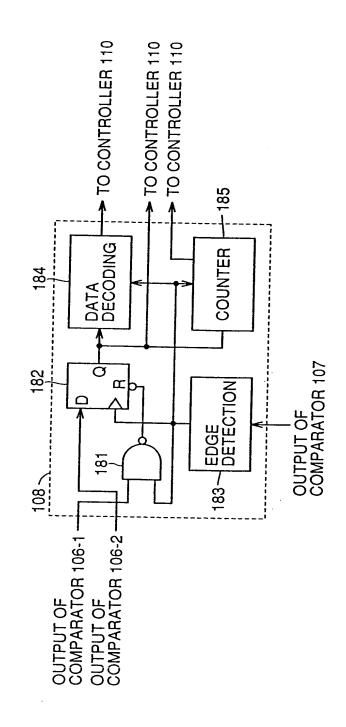


FIG. 10



F/G. 1

FIG. 12



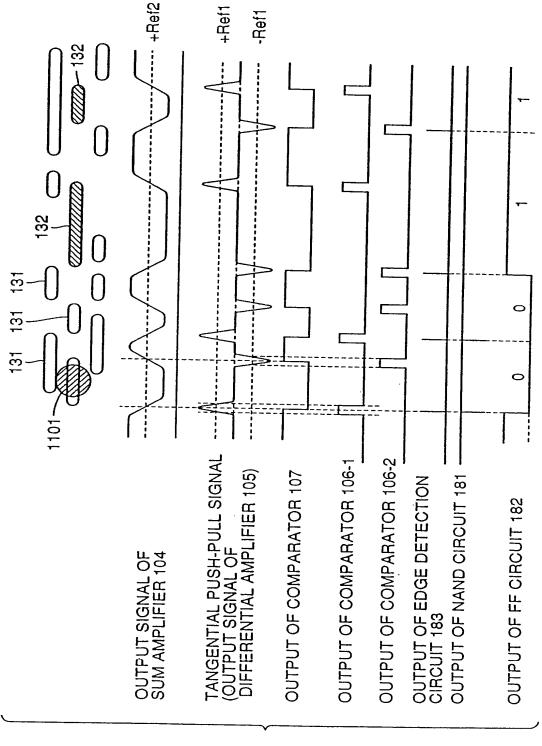


FIG. 13

TRACKING SERVO SIGNAL PULSE GENERATING CIRCUIT PULSE GENERATING CIRCUIT 36-1 ₹36-2 -28-1 LPF LPF ×35-2 -35-1 O <del>Б</del> -27 R PHASE U COMPARING  $\alpha$ 34-1 34-2 7.26 EDGE DETECTION 33 .33-1 33-2 R R C -Ref3Y \+Ref3\ 32 ဓ္ဗ 25-1 25-2 +Ref1 Y -23-2 +Ref2入 +Ref4V 23-1 23-3 -23-4 -24 DIRECTION OF BEAM PROGRESS ๙ INNER PERIPHERAL SIDE OUTER ↓ PERIPHERAL SIDE

FIG. 14

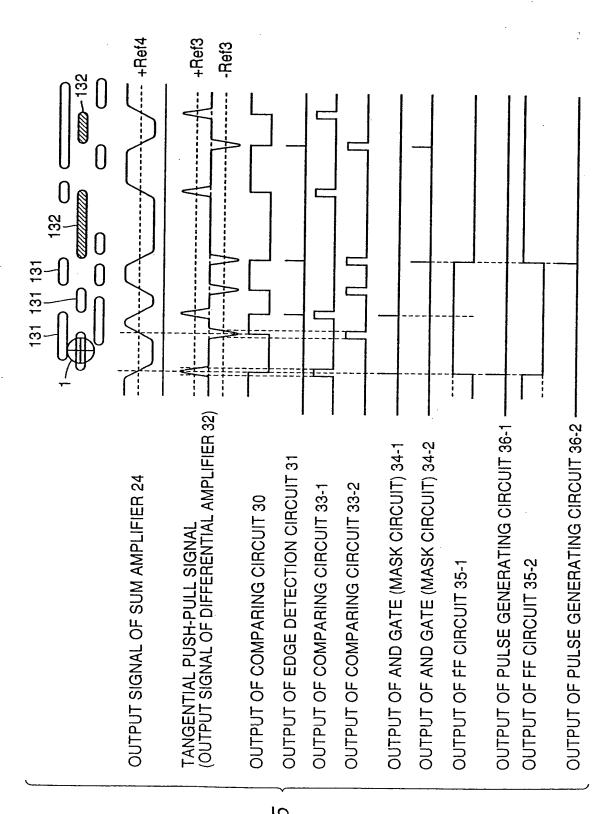
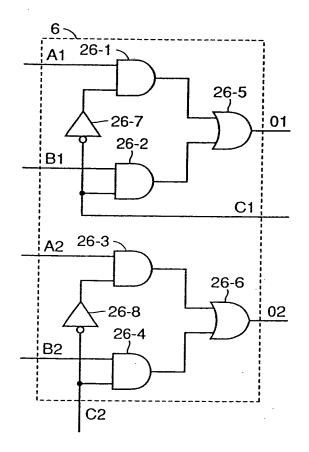


FIG. 1!

FIG.16



TRACKING SERVO SIGNAL PULSE GENERATING-CIRCUIT PULSE GENERATING CIRCUIT ~36-2 736-1 - 28-2 728-1 F F 4 √35-2 735-1 O <del>Б</del> В α R PHASE COMPARING
V CIRCUIT 34-1 34-2 EDGE DETECTION A2 C1 B2 O40 02 7.26 က 733-2 -33-1 -Ref3\(\frac{1}{4}\) 人+Ref3人 × 32 9 25-2 25-1 +Ref 入 /-Ref4 +Ref2 \ 23-3 723-4 - 24 + DIRECTION OF BEAM PROGRESS Ø 7 INNER PERIPHERAL 22a 21 SIDE A 7 ס OUTER ♥ PERIPHERAL SIDE

F/G.1

PULSE GENERATING-CIRCUIT PULSE GENERATING CIRCUIT ~ 36-2 36-1 TRACKING SERVO SIGNAL 735-2 35-1 α, <u>하</u> 1<del>-</del> -φ-LPF 38 34-1 34-2 EDGE 3. 37 733-2 733-1 -Ret3 <u>十</u> 人+Ref3 人 × 32 39 -Hef4 -23-2 - 23-3 723-1 -23-4 724 DIRECTION OF BEAM PROGRESS ๙ 7 22 O INNER PERIPHERAL SIDE

FIG. 18

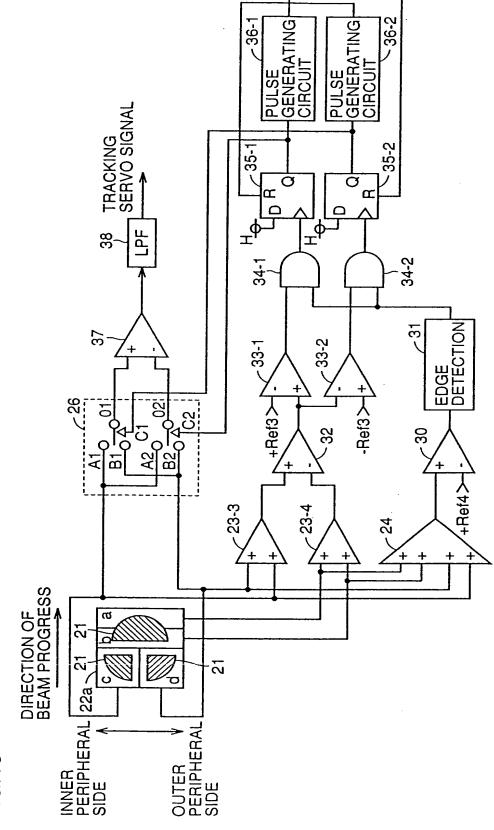


FIG. 19